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ABSTRACT

This summary report provides data from two surveys conducted in 1973-74 and 1975-76 by the American Society of Allied Health Professions and the American Hospital Association to assess the representation of racial and ethnic minorities in allied health fields through their enrollment in educational programs. Section 1 reviews the methodology used to survey all nonmilitary hospitals, excluding prison and Justice Department hospitals, in the United States and associated areas, and accredited collegiate institutions. Sections 2 and 3 pose 25 critical questions, which are followed by a data table providing the statistical information to answer the questions posed. Critical comments are presented as quotations and highlighted in rectangular boxes. Other comments are also made. Section 2 addresses questions regarding enrollment including minority enrollment by setting and year, by occupation and award level, by regional geographic distribution, and by enrollment in minority institutions. Section 3 considers funding (federal government). Enrollment by racial/ethnic group (Black, Native American, Asian, Hispanic) is summarized in Section 4. Section 5 makes recommendations concerning information needs and corrective approaches. (YLB)

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Minorities in Allied Health Education

*A Comprehensive Summary
of the Report - January 1980*

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INTRODUCTION

The Civil Rights Act of 1964 provided a public mandate to initiate programs for ameliorating the social/economic barriers confronting racial and ethnic minorities in this country. Among the legislative efforts to reduce problems associated with educational barriers, is Section 798 of the Health Professions Education Assistance Act of 1976 (PL 94-484). This Section was designed to "increase educational opportunities for minorities and the disadvantaged in the allied health professions." Federal initiatives for this Section are administered by the Office of Health Resources Opportunity, the sponsor of this study.

The parent study from which this summary was prepared was conducted by the American Society of Allied Health Professions, Contract No. HRA 232-79-0031. Valuable contribution to the development of the final Report was made by the Society's Equal Representation in Allied Health (ERAH) committee. The Conclusions and Recommendations that are presented in the Final Report were formulated by the ERAH committee and are also included in this document.

The purpose of the Minorities in Allied Health Report was to provide a preliminary assessment of the representation of racial and ethnic minorities in allied health fields.¹ In the allied health professions, as with other health fields, there is mounting evidence to indicate that minorities have met with mixed success in obtaining the desired level of training to qualify them for professions of their choosing.

¹Allied health, as it is commonly understood, includes all health occupations with the exception of medicine, optometry, dentistry, veterinary medicine, osteopathy, pharmacy, podiatry, and nursing and public health occupations.

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The data utilized in this study only permit a preliminary determination of enrollment in educational programs. Also, the report does not include data on retention, attrition or graduation rates. Conclusions reached and recommendations provided suggest a basis from which the Office of Health Resources Opportunity, Health Resources Administration, Department of Health and Human Services, can develop and implement specific programs whereby the representation of minorities can be increased in the allied health professions.

For the purposes of this Report, the term "minority" refers to Black, Hispanic, Asian and Native Americans.

The data utilized in the Report was that contained in two independent surveys conducted in 1973-74 and 1975-76 by the American Society of Allied Health Professions (ASAHP) and the American Hospital Association (AHA).

The Report consists of five (5) sections. They include: (1) an overview of the survey methodology employed, (2) the enrollment patterns of minorities in allied health training programs, (3) enrollment patterns as separately profiled for each of the four minority groups comprising in study, (4) the summary and major findings and (5) conclusions and recommendations emanating from the data.

The format which has been employed in preparing this Summary is that of posing a series of 25 critical questions which are presented graphically with large numbers. The data table which follows each question, provides the statistical information to answer the question posed. Critical comments are presented as quotations and highlighted in rectangular boxes, i.e.,

"Critical comments are provided thusly."

ACKNOWLEDGMENTS

In preparing this report, I would like to acknowledge those persons without whom completion of the task would have been impossible.

First, I would like to thank Mr. Horace Carpenter, Project Officer, for his encouragement and many critiques in helping develop the style and contents of this Summary.

Second, I would like to offer gratitude to Dr. Carlton P. Alexis, Vice President for Health Affairs Howard University, for his providing the opportunity and encouragement to me to write this report.

Third, I am indebted to the American Society of Allied Health Professions for the opportunity to work on the original report from which the data for the Summary were drawn. Staff of the Society whom deserve special mention are Mr. Richard Nunn, Ms. Pam Griffith, and Ms. Roxane Eikhof.

Fourth, I would like to cite the contributions of the Committee for Equal Representation in Allied Health for its many contributions to the development of the original report and hence, this summary.

Last, but by no means least, I wish to acknowledge the work of my wife, Bettie, in helping me prepare this Executive Summary for it was she who assisted me in posing the several questions contained herein.

Exhibit 1: Distribution of Questions by Issue and Racial/Ethnic Group

Issue	Racial/Ethnic Group				
	All Minority Groups	Black Americans	Native Americans	Asian Americans	Hispanic Americans
Enrollment in Hospitals and Colleges	Q1	Q2	Q3	Q4	Q5
Highest Occupational Enrollment	Q6	Q7	Q9	Q11	Q13
Lowest Occupational Enrollment	Q6	Q8	Q10	Q12	Q14
Geographic Distribution of Minority Enrollment	Q15				
Number of Allied Health Programs in Minority Institutions	Q16	Q17	Q21	Q23	Q19
Award Level of Allied Health Programs in Minority Institutions	Q24	Q18 Q24	Q22 Q24		Q20 Q24
Funding	Q25				

Section I

(An Overview of the Survey Methodology Employed in the Report)

Methodology Employed

The data on which the report is based originated from two surveys conducted in 1973 and 1975 by the American Hospital Association (AHA) and the American Society of Allied Health Professions (ASAHP). The surveys were funded under contracts from the Bureau of Health Manpower, DHEW.

The survey universes were (1) all non-military hospitals, excluding prison and Justice Department hospitals in the U.S. and U.S. Associated areas for the AHA survey and (2) accredited collegiate institutions for the ASAHP survey. The number of institutions and programs contained in the two surveys is summarized below:

Chart 1

Institutions and Programs Surveyed

	AHA 73	AHA 75	ASAHP 73	ASAHP 75
Number of Institutions	1739	1806	1428	1624
Number of Programs	4273	4826	5153	5624

The universe for 1973 and 1975 for both the AHA and ASAHP surveys was defined as all non-military hospitals, excluding prison and Justice Department hospitals in the U.S. and the U.S. associated areas.¹

Some duplication of programs between hospital and collegiate surveys appears to have occurred. For some occupations considered in the two surveys, some overlap between programs in the hospital and collegiate files was evident. Such overlap, however, was very minimal. Thus,

"the report represents unique allied health programs in collegiate and hospital settings."

¹ American Samoa, the Canal Zone, Guam, Puerto Rico, Marshall Islands, and the Virgin Islands.

Two other observations on data are important in interpreting the findings.

"Not all of the programs responding to the four surveys provided data on ethnic enrollments."

In the ASAHP 1975 survey, although there was an overall response rate of 75%, there was a 25% rate of non-response to the ethnic enrollment item for small programs. The non-response rate increased to 75% for those programs with over 400 enrollees. These phenomena raise the question as to whether the data in the report are validly representative of minority participation in the universe of allied health training programs.

In order to properly interpret findings, the following points seem to warrant stating. There was non-response to the minority representation item as follows:

- 30% for the universe of junior colleges
- 40% for the universe of non-university four-year schools
- 38% for baccalaureate and graduate degree granting programs
- 31% for certificate programs and
- 35% for associate degree programs

Given the above, it seems safe to say that

"The findings in this report should be considered 'suggestive' of patterns of minority enrollment in allied health training, rather than definitive."

Since nursing occupations are typically not considered "allied health," and in order to assure compatibility between hospital and collegiate settings,

nursing occupations were deleted from the data files, i.e., R.N., L.P.N. and all nursing specialities. Thus, 1,016 of 4,826 programs were dropped from the 1975 hospital file and 617 of 4,273 programs were eliminated from the 1973 file. Continuing education programs were deleted because of their small number. Hence, the number of programs employed for analysis in the report is as follows:

1975 AHA	3,810 programs
1975 ASHP	5,612 programs
<hr/> Subtotal	<hr/> 9,422 programs

Fifty-nine (59) occupations were selected to be profiled in the report. They met the two criteria which had been established; (1) size (at least 30 programs reported enrollment data) and (2) distribution (data were available in the four (AHA and ASHAP) files.

With this background for interpreting the data are presented below.

Section II

(Minority Enrollment in Educational Allied Health Programs)

- (A) Minority Enrollment by Setting and Year
- (B) Minority Enrollment by Occupation and Award Level
- (C) Geographic Distribution of Minority Enrollment
- (D) Enrollment in Minority Institutions
- (E) Funding

A. Minority Enrollment by Setting and Year

Q1 What was the enrollment of all minorities in 1973 and 1975 in hospital and collegiate settings?

Table 1

Minority Enrollment Data for Responding Institutions

	Collegiate Programs		Hospital Programs	
	1975-76	1973-74	1975-76	1973-74
Total Enrollment	142,997	162,391	20,687	22,085
Percent Minority Enrollment	15.9%	15.8%	13.8%	17.9%

(Percent minorities in the population, according to the 1970 census was 17.6%)

"The enrollment of minorities in allied health training programs (in three of the four data files) was less than that of their representation in population." Minority enrollment in hospital settings declined significantly (4.1%) from 1973 to 1975. It remained about the same in collegiate settings. Minority student enrollment tended to be greater in certificate and associate degree level programs as compared with baccalaureate and higher levels.

Q2

What was the enrollment of Black Americans in 1973 and 1975 in hospital and collegiate settings?

Table 2

Black Enrollment Data

	Collegiate Programs		Hospital Programs	
	1975-76	1973-74	1975-76	1973-74
Percent Black Enrollment	10.1%	9.9%	8.8%	13.7%
Percent Minority Enrollment	15.9%	15.8%	13.8%	17.9%

(Percent Blacks in the populations, according to 1970 census, was 11.1%)

"The enrollment of blacks in allied health training programs was lower than the percentage of blacks in the population in every case, except for the 1973-74 hospital based programs."

Comment

A dramatic decline (4.9%) was witnessed in the enrollment of blacks in hospital programs from 1973 to 1974. The data for blacks tend to parallel that for total minorities.

Q3

What was the enrollment of Native Americans in 1973 and 1975 in hospital and collegiate settings?

Table 3

Native American Enrollment Data

	Collegiate Programs		Hospital Programs	
	1975-76	1973-74	1975-76	1973-74
Percent Native American Enrollment	0.7%	0.4%	0.8%	0.4%
Percent Minority Enrollment	15.9%	15.8%	13.8%	17.9%

(Percent of Native Americans in the population, according to 1970 census, was 0.4%)

"The enrollment of Native Americans in hospital and collegiate settings in 1975 was greater than their representation in the population, but Native American enrollment in 1973 in both settings was approximately equal to their representation in the population."

Comment

The above findings are in contrast to those for blacks and total minorities (and Hispanics as we shall see later).

Q4

What was the enrollment of Asian Americans in 1973 and 1975 in hospital and collegiate settings?

Table 4

Asian American Enrollment Data

	Collegiate Programs		Hospital Programs	
	1975-76	1973-74	1975-76	1973-74
Percent Asian Enrollment	1.6%	2.1%	1.5%	1.1%
Percent Minority Enrollment	15.9%	15.8%	13.8%	17.9%

(Percent Asians in population, according to 1970 census, was 0.8%)

"Asians were the only minority group which can be considered over-represented in allied health education for the years reported in this study."

Q5

What was the enrollment of Hispanics in 1973 and 1975 in hospital and collegiate settings?

Table 5

Hispanic Enrollment Data

	Collegiate Programs		Hospital Programs	
	1975-76	1973-74	1975-76	1973-74
Percent Hispanic Enrollment	3.6%	3.3%	2.6%	2.7%
Percent Minority Enrollment	15.9%	15.8%	13.8%	17.9%

(Percent Hispanics in the population, according to 1970 census was 5.1%)

"The enrollment of Hispanics in both settings and years was well below their representation in the population."

B. Minority Enrollment by Occupation and Award Level

Q6 In which allied health occupations are minority enrollment the highest and in which are minority enrollments the lowest?

Table 6

Highest			Lowest		
Occupation	% Minority	Total Enrollment	Occupation	% Minority	Total Enrollment
Unit Manager	100.0	43	Dental Hygienist	5.3	7006
Pharmacy Asst.	55.5	46	Nurse Anesthetist	6.8	338
• Human Service Mental Health (BA & Grad. Levels)	38.9	465	Nuclear Medical Technology	7.4	448
Dietetic Tech.	35.2	1355	• Occupational Therapy	7.7	3183
• Health Admin. (Assoc. & BA Levels)	35.2	1896	• Speech Path./ Audiologist	8.0	3431
Human Service Mental Health (Certif. & Assoc. Levels)	33.8	5455	• Clinical Pastoral Coun.	8.1	62
Alcohol/Drug Spec.	29.2	667	• Physical Therapist	8.4	4735
Medical Record Technician	29.0		Histologic Tech.	8.7	69
Nurse Aide/Ord.	27.1	2644	Electro Encep. Tech.	8.8	114
Occ. Therapy Assist.	26.9	1079	• Art/Dance Music Ther.	8.9	862

- Indicates occupations for which over half of student enrollment is at baccalaureate level or higher.

Two of the ten highest occupations are those offered at the baccalaureate or higher level. In contrast, 5 of the lowest occupations are offered at the baccalaureate or higher levels. There was not a single occupation which was among the highest or lowest in terms of all 4 minorities. Hence there is no clear pattern as to occupation having the highest participation rates for any minority group. However, occupations with the highest involvement of Native Americans include fields of practice which are associated with the delivery of primary care.

Q7

In Which Occupations is Black Enrollment the Highest?

Table 7

Occupations With Highest Black Enrollment

Highest		
Occupation	% Black	Total Enrollment
Unit Manager	100.0	43
• Health Administrator (Assoc. & BA Levels)	31.4	1896
Human Services/Mental Health (Certif. & Assoc. Levels)	29.2	5455
Pharmacy Assistant	26.1	46
• Human Services/Mental Health (BA & Graduate Levels)	25.2	465
Dietetic Technician	24.6	1355
Respir. Therapy Technician	19.2	635
Medical Record Technician	18.1	1732
Dialysis Technician	16.7	54
Laboratory Assistant	16.5	388
Nurse Aide/Orderly	16.2	2644
Radiation Therapy Technician	15.5	97

(Overall % Black enrollment, all occupations: 10.1%)

- Training primarily at Baccalaureate or Graduate level.

Q8 In Which Occupations is Black Enrollment The Lowest?

Table 8

Occupations With Lowest Black Enrollment

Lowest		
Occupation	% Black	Total Enrollment
• Environment Health Engineer	1.5	615
Dental Hygienist	2.2	7006
• Biomedical Engineer	2.4	1096
• Occupational Therapist	3.1	3183
Nuclear Medical Technician	3.3	448
• Physician Assistant (BA & Graduate Level)	3.5	1163
Unit Clerk	4.1	268
• Environmentalist	4.4	1958
• Physical Therapist	4.5	4735
Nurse Anesthetist	4.7	338
• Clinical Pastoral Counselor	4.9	62

(Overall % Black enrollment, all occupations: 10.1%)

- Training primarily at Baccalaureate or Graduate level.

Q9 In Which Occupations is Native American Enrollment The Highest?

Table 9

Occupations With Highest Native American Enrollment

Highest		
Occupation	% Native American	Total Enrollment
Alcohol/Drug Specialist	17.4	667
Physician Assistant (Certif. & Assoc. Levels)	5.3	585
• Rehabilitation Counselor	2.2	2447
Emergency Medical Technology	1.8	4473
• School Health Education	1.8	2625
Dialysis Technician	1.8	54
• Biomedical Engineer	1.4	1096
• Health Administrator (Assoc. & BA Levels)	1.3	1896
Human Services/Mental Health (Certif. & Assoc. Levels)	1.3	5455
• Health Administrator (Graduate Level)	1.2	1371
Medical Transcriptionist	1.2	170

(Overall % Native American enrollment, all occupations: 0.7%)

- Training primarily at Baccalaureate or Graduate level.

Q10 In Which Occupations is Native American Enrollment The Lowest?

Table 10

Occupation With Lowest Native American Enrollment

Lowest		
Occupation	% Native American	Total Enrollment
Unit Clerk	0.0	268
Unit Manager	0.0	43
Biomed. Engr. Technician	0.0	458
Cytotechnologist	0.0	165
Histologic Technician	0.0	69
Laboratory Assistant	0.0	388
Dental Lab. Technician	0.0	1471
• Human Services/Mental Health (BA & Graduate Levels)	0.0	465
Optometric Assistant	0.0	275
Pharmacy Assistant	0.0	46
Nuclear Medical Technology	0.0	448
Radiation Therapy Technician	0.0	97
Art/Dance/Music Therapy	0.0	862
Recreational Therapist	0.0	928
Recreational Therapist Technician	0.0	275
Clinical Pastoral Counselor	0.0	62

(Overall % Native American enrollment, all occupation: 0.7%)

- Training primarily at Baccalaureate or Graduate level.

"Five (5) of the 11 occupations with the highest Native American enrollment were at the baccalaureate or graduate levels. Sixteen (16) occupations had no Native Americans enrollment."

Q11 In Which Occupations is Asian American Enrollment The Highest?

Table 11

Occupations With Highest Asian American Enrollment

Highest		
Occupation	% Asian	Total Enrollment
Pharmacy Assistant	26.1	46
• Environment Health Engineer	7.6	615
Cytotechnologist	6.7	165
• Recreational Therapist	5.4	928
• Biomedical Engineer	5.2	1096
Dental Lab. Tech.	5.0	1471
• Medical Social Worker	4.1	1132
• Environmentalist	3.5	1958
• Dietitian/Nutritionist	3.4	5664
• Clinical Pastoral Counselor	3.2	62

(Overall % Asian enrollment, all occupations: 1.6%)

- Training primarily at Baccalaureate or Graduate level.

Q12 In Which Occupations is Asian American Enrollment The Lowest?

Table 12

Occupations With Lowest Asian American Enrollment

Lowest		
Occupation	% Asian	Total Enrollment
Unit Manager	0.0	43
Envir. Health Technician	0.0	904
Dialysis Technician	0.0	54
Rec. Ther. Technician	0.0	275
Emergency Medical Technology	0.2	4473
Operating Room Technician	0.2	1284
• Human Services/Mental Health (BA & Graduate Levels)	0.2	465
Human Services/Mental Health (Certif. & Assoc. Levels)	0.3	5445
Physical Therapy Assistant	0.3	1178
Medical/Dental Secretary	0.3	2489
Alcohol/Drug Specialist	0.3	667
• Health Administrator (Assoc. & BA Levels)	0.3	1896

(Overall % Asian enrollment, all occupations: 1.6%)

- Training primarily at Baccalaureate or Graduate level.

"Seven (7) of the 10 occupations with the highest Asian enrollment are at the baccalaureate and graduate levels. Occupations having the lowest Asian American enrollment tend to be (10 of 12) at the Certificate Associate degree."

Q13 In which occupations is Hispanic Enrollment the Highest?

Table 13

Occupations With The Highest Hispanic Enrollment

Occupation	% Hispanic	Total Minority
Unit Clerk	20.9	268
Mental Retardation Aide	14.0	221
Physical Therapy Assistant	14.0	1178
Occupational Therapy Assistant	13.8	1079
• Human Services/Mental Health (BA & Graduate Levels)	13.5	465
Medical Transcription	11.2	170
Psychiatric Technology	10.1	505
Optometric Assistant	8.7	275
Medical Record Technician	8.7	1732
Dietetic Technician	8.6	1355

- Training primarily at Baccalaureate or Graduate level.

Q14

In which occupations is Hispanic Enrollment the Lowest?

Table 14

Occupations With The Lowest Hispanic Enrollment

Occupation	% Hispanic	Total Minority
Unit Manager	0.0	43
Histologic Technical	0.0	69
Dialysis Technical	0.0	54
• Clinical Pastoral Counseling	0.0	62
Alcohol	0.1	667
Nurse Anesthetist	0.3	338
• Art/Dance/Music Therapy	0.6	862
Rec. Ther. Technician	0.7	275
• Environmentalist	0.9	1958
• Medical Record Admin.	0.9	1154

- Training primarily is at Baccalaureate or Graduate level.

"There were four occupations for which there were no Hispanics enrolled:..... In 43 of the 59 occupations, Hispanics enrollment was less than their representation in the population (5.1%, US Census 1970)..... Hispanic enrollment was the lowest in occupations which require the baccalaureate or higher degrees....."

C. Geographic Distribution of Enrolled Minorities

Q15

What is the regional distribution of enrollment for each of the four ethnic minority groups considered in this report?

Table 15

Percent Enrollment of Four Minorities in 1975-76
Collegiate and Hospital Program By Census
Division

CENSUS DIVISION	BLACK			NATIVE AMERICAN			ASIAN			HISPANIC			TOTAL MINORITY		
	Pop.	Coll.	Hosp.	Pop.	Coll.	Hosp.	Pop.	Coll.	Hosp.	Pop.	Coll.	Hosp.	Pop.	Coll.	Hosp.
1. New England	3.3	5.2	1.9	0.1	0.1	0.0	0.3	0.9	2.3	1.5	1.2	0.9	5.2	7.4	5.1
2. Middle Atlantic	10.6	10.8	9.2	0.1	0.2	0.2	0.4	1.1	1.4	5.3	2.5	2.6	16.5	14.6	13.4
3. East North Central	9.6	8.6	9.0	0.1	0.4	0.2	0.2	0.9	1.2	1.7	0.9	1.3	11.7	10.8	11.7
4. West North Central	4.3	4.7	4.4	0.6	2.0	0.7	0.2	0.8	0.8	0.8	0.6	1.1	5.9	8.0	7.0
5. South Atlantic	20.8	16.5	11.7	0.2	0.2	1.1	0.2	0.7	0.7	2.4	1.5	3.6	23.7	18.8	17.2
6. East South Central	20.1	13.9	13.7	0.1	0.4	0.0	0.1	0.7	0.8	0.2	0.3	0.6	20.5	15.0	15.1
7. West South Central	15.6	14.0	16.5	0.6	1.4	0.9	0.2	1.1	1.0	12.9	10.8	8.1	29.3	27.2	26.5
8. Mountain	2.2	3.4	2.9	2.8	3.1	7.9	0.5	1.3	1.0	12.1	6.7	8.6	17.5	14.6	20.5
9. Pacific	5.7	7.2	4.2	0.6	0.6	1.9	4.0	6.6	7.5	12.5	6.9	5.1	22.8	21.3	18.7
Total	11.1	10.1	8.8	0.4	0.7	0.8	0.8	1.6	1.5	5.3	3.1	2.6	17.6	15.5	13.8

Black collegiate program enrollment in 5 of the 9 census regions, was greater than black representation in the population; however, in hospital based programs, black enrollment was greater in only one of the 9 regions than the representation of blacks in the population.

In 7 of the 9 census regions, Native American enrollment in collegiate allied health programs was greater than their representation in the population and in two regions Native American enrollment equaled their representation in the population. Similarly, in hospital programs in 7 regions, Native American enrollment was greater than their representation in the population.

Asian American enrollment in both hospital and collegiate programs in every region of the country was greater than their representation in the population.

Hispanic enrollment in collegiate programs in 8 of the 9 regions was below their representation in the population. Likewise, in hospital programs in 6 of 9 regions their enrollment was less than their representation in the population.

"Regionally, Hispanics and blacks seem to be under-represented in collegiate and hospital based allied health programs to a greater extent than Asian and Native Americans."

D. Enrollment in Minority Institutions

The production of certain disciplines of minority health manpower, e.g., physicians and dentists, by minority institutions is well known. However, the role of minority institutions in training minorities for allied health occupations is virtually unknown. The issue of the provision of allied health education by minority institutions is examined in this section.

Definition of Terms

The following terms and definitions are provided:

1. Total minority institutions - the aggregate of all Black Hispanic, Native American and Asian institutions.
2. Traditional institutions - those institutions which were founded by or for a particular ethnic group.
3. Predominant institutions - those institutions in which one ethnic group comprises greater than 50% of the student body.
4. Pluralistic institutions - those institutions in which one ethnic group represents the largest segment of the student body (a plurality) though no racial or ethnic group constitutes a numerical majority.
5. Significant institutions - those institutions in which one ethnic group represents 20-50% of the institution's total student body.

Note: Institutional Categories 2 thru 5 are mutually exclusive.

Q16 How many allied health programs are offered in minority institutions?

Table 16

Allied Health Programs in Minority Institutions

Type of Institution	Number	Number with AH Programs	Number of AH Programs	% of Minority Institution Programs
Traditional	121	46	81	14.4
Predominant	71	32	117	20.8
Pluralistic	11	8	32	5.7
Significant	117	103	333	59.1
Totals	320	189	563	100.1

"Ten percent (563) of the 5,624 collegiate allied health programs are offered in the four types of minority institutions included in this report. This constitutes approximately 10% of the total allied health program offering 5624 in the collegiate population."

Q17 How many allied health programs are offered in Black Institutions?

Table 17

Allied Health Programs In Black Institutions

Type of Black Institution	No.	No. With Allied Health Programs	No. of Allied Health Programs
Traditional	106	44	79
Predominant	55	23	82
Pluralistic	8	6	23
Significant	139	82	265
Total	308	155	449

Q18 At what award levels are allied health programs offered in Black Institutions?

Table 18

Program Award Levels in Black Institutions

Award Level	Progs. in Black Institutions		Programs in Non-Minority Institutions	
	#	%	#	%
Certificate	106	23.6	887	17.6
Associate	208	46.3	1322	26.2
Baccalaureate	108	24.1	1867	36.9
Graduate	27	6.0	978	19.4
Total	449	100.0	5054	100.0

"Proportionately, more certificate and associate degree programs are offered in Black institutions than in non-minority institutions. Similarly, Black institutions offered proportionately fewer baccalaureate and graduate level programs."

Q19 How many allied health programs are offered in Hispanic Institutions?

Table 19

Allied Health Programs in Hispanic Institutions

Type of Institution	No.	No. With Allied Health Programs	No. of Allied Health Programs
Traditional/Historical	---	-----	-----
Predominant	10	6	24
Pluralistic	2	2	9
Significant	35	18	56
Total	47	26	89

Q20 At what award levels are allied health programs offered in Hispanic Institutions?

Table 20

Award Levels in Hispanic Institutions

Award Level	Programs in Hispanic Institutions		Programs in Non-Minority Institutions	
	#	%	#	%
Certificate	16	20.8	887	17.6
Associate	34	44.2	1322	26.6
Baccalaureate	25	32.5	1857	36.9
Graduate	2	2.6	978	19.4
Total	77	100.0	5044	100.0

"Proportionately, more certificate and associate degree programs are offered in Hispanic institutions than in non-minority institutions. Hispanic institutions offer proportionately fewer baccalaureate and graduate level allied health programs."

Q21 How many allied health programs are offered in Native American Institutions?

Table 21

Allied Health Programs In Native American Institutions

Type of Institution	No.	No. With Allied Health Programs	No. of Allied Health Programs
Traditional/Historical	15	2	2
Predominant	6	3	11
Pluralistic	1	0	0
Significant	1	1	1
Total	23	6	14

Q22 At what levels are allied health programs offered in Native American Institutions?

Table 22

Award Level	No. in Native American Institutions		No. in Non-Minority Institutions	
	#	%	#	%
Certificate	2	14.0	887	18.0
Associate	11	79.0	1322	26.0
Baccalaureate	1	07.0	1867	37.0
Graduate	0	0.0	978	19.0
Total	14	100.0	5054	100.0

"Six Native American institutions offer 14 allied health programs thirteen (13) of these are at the certificate or associate degree levels, one was offered at the baccalaureate degree.

Q23

What is the situation in Asian Institutions?

"The small number of Asian institutions precludes meaningful analysis."

Q24

To what extent do minority students attend minority institutions in allied health program?

Table 24

Minority students enrolled and Ethnic nature of Institutions offering Allied Health Programs

Types of Institutions in Which Enrollment Found	Number and % of Minority Students Enrolled						Total Minority	
	Black		Native American		Hispanic			
	N	%	N	%	N	%	N	%
Minority Institutions (all categories of this ethnic group)*	5668	39.4	101	10.7	906	7.9	6681	29.5
Non-Minority Institutions	8502	59.0	802	85.0	3829	75.4	15064	66.5
Total	14404		945		5076		22663	

* Minority Institutions includes Traditional, Predominant, Pluralistic and Significant Ethnic Minority Institutions.

"Minority institutions contribute significantly to the enrollment of Black students in programs of allied health. These institutions also contribute to a lesser degree, to the enrollment of Native American and Hispanic students.

- Black institutions account for 39.4% of all black student enrollment in allied health programs.
- Native American institutions account for 10.7% of all Native American student enrollment in allied health programs.
- Hispanic institutions account for 7.9% of all Hispanic student enrollment in allied health programs."

Section III

Funding

Q25

What have been the major sources of federal support for allied health education?

The Department of Health and Human Services, through the Office of Education (OE) and the Bureau of Health Manpower (BHM) has been the major source of federal support for allied health education. From FY 1966-1976, the Office of Education (OE) provided an undetermined amount of financial assistance to allied health students and an estimated \$188 million in vocational education funds for allied health training.

From FY 1965-1976, \$188 million or about 5% of the 4.2 billion appropriated for Bureau of Health Manpower (BHM) was expended for allied health professions training. The largest category of that \$188 million was administered in the form of special improvement grants, amounting to \$63 million for FY 1973 through FY 1977. The next largest category of funding was in the form of special project grants which totalled \$37 million. The percentage of minority institutions that received the two types of grants (special improvement and special projects) was relatively high. However, although 10% of the allied health programs are offered in these institutions, they received approximately 8% of the grant funds.

Data available by the Bureau of Health Manpower makes possible a limited examination of pattern of distribution for the funding through the special improvement mechanism.

Table 25

Minority Versus Non-Minority Institutional
Support 1973, 75 and 77

Year	Minority Institutions			Non-Minority Institutions	
	# of Instit.	Amount	# of Total	# of Instit.	Amount
1973	14	1,537,803	9.9	141	14,036,287
1975	9	823,422	6.1	120	12,683,986
1977	13	1,295,767	8.1	144	14,733,488
Total	36	3,656,992	8.1	405	41,453,761

"Over the periods specified above, it appears that a relatively lower dollar amount of DAHP funding was awarded to minority institutions." (Relative to the proportionate number of allied health programs offered in minority versus non-minority institutions)."

Section IV

Summary of Findings Pertaining to Each Racial/Ethnic Group :

A. Black Enrollment in Allied Health Programs

- Black student enrollment in allied health is lower than the representation of Blacks in the Population.
- Black enrollment in hospital based programs declined over the two-year period studied while remaining unchanged in colleges (for the same period).
- Black enrollments were greater in occupational programs which were offered at the Certificate and Associate degree levels.
- Black enrollments were smaller in occupational programs which were offered at the Baccalaureate and Graduate degree levels.
- A wide range of Black enrollment was found within regions in the country.
- Black institutions seemingly accounted for a larger than would be expected portion of Black student enrollments in the country.
- Within Black institutions, more health program offerings were at the Certificate and Associate degree levels than Baccalaureate.

B. Native American Enrollment in Allied Health Programs

- Native American enrollment in hospital and college-based programs tended to be equal to or greater than the Native American representation in the population.
- Native American enrollment increased from 1973-74 to 1975-76 in both hospital and college settings.
- Native American enrollments were greater in occupational programs which were offered at the Baccalaureate level.
- In a significant number of occupational training areas (16) there was no Native American enrollment.

- A wide range of Native American enrollment was found from region to region and within regions across the country.
- There were few Native American institutions with allied health training programs.
- There was only one Native American institution which offered bachelors degree program.

C. Asian Enrollment in Allied Health Programs

- Asian enrollment in allied health was greater than that found in the population.
- Asian enrollment was higher in college based programs than in hospital based ones.
- Asian enrollments were larger in Baccalaureate degree programs.
- The regional representation of Asians in allied health suggests that as a group, Asians were well represented in all but one region of the country.
- No Asian institutions exist, therefore all Asians are enrolled in non-minority or other-than-Asian institutions.
- The situation for Asians is quite different from that of other minority groups studied in this report.

D. Hispanic Enrollment in Allied Health Programs

- Hispanic enrollment in allied health was lower than the percentage of Hispanics in the population.
- Hispanic enrollment in college based programs increased slightly over the period 1975-76 while it decreased slightly in hospital based programs during the same period.
- Hispanic enrollments were greater in occupational programs which were offered at the Certificate and Associate degree levels.
- Hispanic enrollments were smaller in occupational programs which were offered at the Baccalaureate and Graduate degree levels.

- A wide range of Hispanic enrollment was found within regions of the country.
- Hispanic institutions accounted for 17.8 percent of Hispanic enrollments in all institutions.
- Within Hispanic institutions, the majority of program offerings were at the Certificate and Associate degree levels.

Section V

Conclusions and Recommendations

Conclusions and Recommendations

The purpose of this report is to present data on minority enrollment in collegiate and hospital based allied health training programs at two recent points in time, in order to develop an assessment of specific areas of need facing minorities with respect to training for the allied health fields. To this end, patterns of enrollment have been examined individually for four racial/ethnic groups -- relative to 59 major allied health occupational areas, collegiate vs. hospital training setting, program award level, geographic distribution, and racial/ethnic characterization of institutions.

A. Information Needs

Program enrollment data analyzed in this report constitutes the only available data on minorities in all of the allied health fields. Analysis of enrollment data, however, is only a preliminary step toward assessing the representation and needs of racial/ethnic groups in allied health practice areas. A full picture would require analysis of employment patterns as well as training patterns, and in-depth exploration of factors accounting for those maldistributions which are identified.

Many different types of factors may prove to be critically related to patterns of minority participation. These include career counseling, recruitment practices, admissions procedures and criteria, institutional support systems as these affect retention of students in training programs, graduate placement efforts, certification practices, and employment opportunities. Without available data for studying all of these areas, minority participation patterns and their dynamics cannot be fully understood. Whereas a relationship between minority enrollment and level of

training (degree awarded) is clearly indicated in this study, for instance, it is not known whether this is attributable to characteristics of the educational process or to employment opportunities for trained minority personnel.

Any recommendations to be made about meeting the needs of racial/ethnic minorities in the allied health areas must begin by addressing these critical information gaps. Specifically:

- It is necessary to update and validate the findings presented here by analyzing current enrollment data. To this end, ASAHP is currently under contract with the Division of Associated Health Professions of BHM, to conduct a 1979-80 nationwide inventory of collegiate allied health training programs.
- There is an immediate need for a study of the feasibility of collecting data on processes underlying the distribution of minorities in allied health training -- including approaches to career counseling, recruitment, admissions, and retention of minority students in hospital and college programs for the various occupational areas and award levels. Comprehensive data in these areas is necessary for an investigation into the reasons why minority involvement is greater at the lower levels of training, and for certain occupational and geographic areas.
- There is a critical need for a study of the feasibility of collecting data on employment patterns, by racial/ethnic group, for all types of settings and fields of practice. This feasibility study should result in specific recommendations for data collection and analysis strategies to answer key questions about minority practice pattern and geographic maldistributions.
- A definitive study should be conducted to determine the impact of minority institutions on the overall allied health manpower pool.
- Further investigation should be made to determine if the degree of minority representation in hospital based programs is continuing to decline and, if so, why.

B. Corrective Approaches

As a preliminary indication of how minorities fare in allied health education programs, the present study serves the purpose well, by documenting the need for corrective action. From the findings of the study it is learned that patterns of participation for the four minority groups differ greatly, and so corrective actions have to be individually targeted to the unique needs of each racial/ethnic group.

The following recommendations have been made by the ASAHP Committee on Equal Representation in Allied Health:

1. Enrollment

- Enrollment into allied health programs should be approached from a regional, state, and local level across all geographic segments. To improve communication and the dissemination of programmatic and enrollment data between these levels, from six to nine regional allied health education centers should be established. Such centers would provide the structural framework for an allied health information/innovation diffusion network.
- The Federal government should provide incentives to increase minority enrollment in Baccalaureate and Graduate programs. Such incentives should include capitation grants for increased minority enrollment in selected allied health areas, start-up grants for traditionally Black institutions and other schools serving minority populations, and special funds to develop tutorial support systems to reinforce and/or modify traditional curricula to enhance minority retention pattern.
- The special enrollment problems of each of the racial/ethnic groups should be considered separately, but not in isolation. The data suggests that a dynamic approach is essential to the successful implementation of special minority enrollment programs and, while each element is unique, it must be remembered that they are interdependent and interrelated. Therefore, support systems (tutorials, counseling and guidance, etc.) should focus on the total educational environment with a sub-unit within this context addressing specific minority group problems.

2. Recruitment

- Recruitment programs targeted to minorities should be developed for junior high schools, with special emphasis on the importance of science courses. Through regional centers, linkages should be developed between secondary and post-secondary education systems to maximize minority groups exposure to career counseling for the full range of allied health programs.
- A series of regional workshops designed for allied health faculty should be established to focus on the special recruitment problems of minority allied health students.
- Funding should be provided to establish from two to four Graduate level allied health programs in traditionally Black and other minority educational institutions, in order to accelerate the production of role models for minorities.
- The availability of financial assistance for minority students enrolled in areas where there appears to be underrepresentation should be increased.
- Work-study programs as a means by which disadvantaged minorities can obtain training for allied health practice areas should be increased.

3. Employment

- Pilot programs to examine the issues of deployment into underserved communities should be developed. Several programs designed to track minority students through training in traditionally minority vs. traditionally white institutions should be funded. The purpose of such a longitudinal study would be to identify significant variables mitigating against successful education, employment placement, and career development.

4. Admissions

- Criteria for admissions should be examined and evaluated as possible obstacles to the acceptance and training of minorities who are willing and able to fill needed health service areas in underserved regions.

5. Outreach and Demonstration

- A national clearinghouse for minorities in allied health should be established to collect and disseminate statistics on minority participation, to offer career counseling and training programs, and to provide information on financial aid available to minorities entering allied health programs.